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New and Rare *Dipoena* from Mexico and Central America (Araneae, Theridiidae)

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The principal works on the Central American spiders of the genus *Dipoena* are those of Chickering (1943 and 1948), who described 25 new species from Panama. An examination of the *Dipoena* in the collection of the American Museum of Natural History has revealed several species from Central America and Mexico that could not be placed and are here described as new. I would like to thank Dr. W. J. Gertsch for making the collection in his care available to me.

The types of new species and all specimens mentioned, unless indicated otherwise, belong to the American Museum of Natural History.

All palpi illustrated are left ones.

Dipoena chickeringi, new species

Figures 1-4

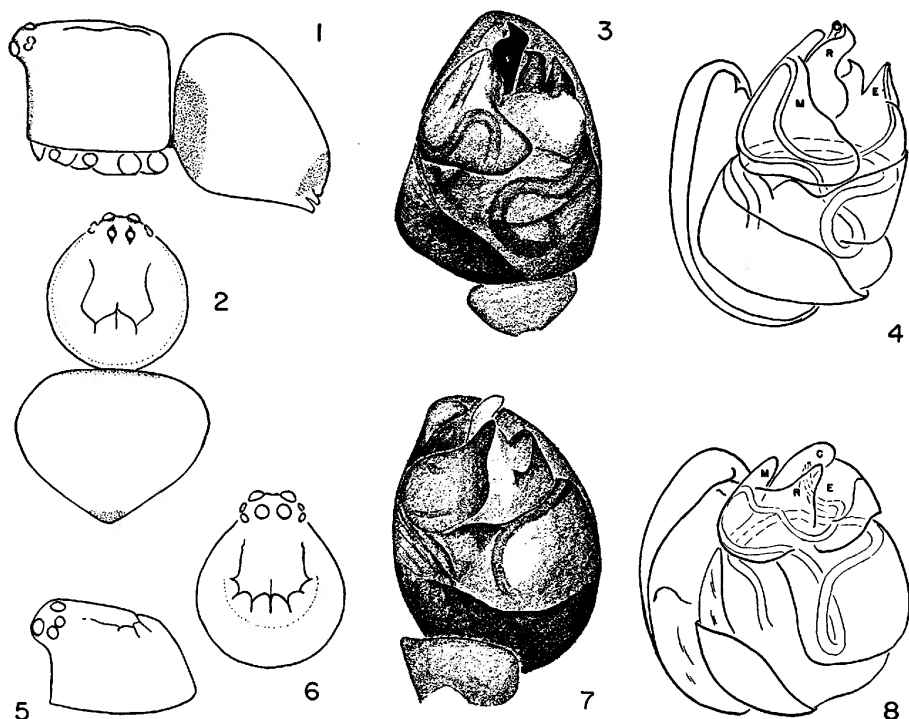
MALE: Total length, 1.3 mm.

Carapace yellowish white except for dark spots around anterior and posterior median eyes. Clypeus with a black line which is narrower under eyes, becoming wider below. Legs yellowish white, with narrow dusky rings, more prominent on the venter, which are found near distal ends of femora and patellae and at middle and distal portions of tibiae and metatarsi. Abdomen white with black spot above spinnerets and dusky area above pedicel (figs. 1, 2).

Carapace cylindrical in shape, as illustrated by figures 1 and 2. Anterior median eyes separated by one-third of their diameter, by one-fourth from laterals. Posterior median eyes one diameter apart, one diameter from laterals. Laterals touching, as is usual in this genus. Anterior

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median eyes the largest, others two-thirds of their diameter. Height of clypeus about five diameters of anterior median eyes. Fourth legs slightly longer than first. First and second legs subequal. A tubercle on retro-lateral surface of each patella. Abdomen triangular, wider than long, having on dorsum a number of very small sclerotized spots, which may have been the bases of setae.



FIGS. 1-4. *Dipoenia chickeringi*, new species. 1. Male, lateral view. 2. Male, dorsal view. 3. Left palp, ventral view. 4. Palpus, subventral view, expanded.

FIGS. 5-8. *Dipoenia origanata*, new species. 5. Carapace of male, lateral view. 6. Carapace of male, dorsal view. 7. Palpus, ventral view. 8. Palpus, mesoventral view, expanded.

C, conductor; E, embolus; M, median apophysis; R, radix.

This species can be distinguished from others by its palp, which has the tip of the embolus cone-shaped. Radix very strong and sclerotized. Conductor a thin flexible strand of tissue behind radix (figs. 3, 4).

MEASUREMENTS: Carapace 0.71 mm. long, 0.65 mm. wide, 0.52 mm. high. First patella, 0.23 mm., tibia, 0.36 mm.; second patella, 0.22 mm., tibia, 0.35 mm.; third patella, 0.20 mm., tibia, 0.30 mm.; fourth patella, 0.25 mm., tibia, 0.48 mm.

TYPE LOCALITY: Male holotype from El Volcán, Chiriqui, Panama, March 2, 1936 (W. J. Gertsch).

Dipoena copiosa, new species

Figures 14, 15, 27, 28

FEMALE: Total length, 1.7 mm.

Carapace brown, the border and cephalic region dusky. Sternum and legs light brown. Dorsum of abdomen with two light gray areas in front and a large white spot anterior to spinnerets (fig. 14). Venter black above pedicel and between epigynum and spinnerets, sides brownish gray.

Carapace elevated behind eyes (fig. 15) with several strong bristles in cephalic area. Anterior median eyes separated by two-thirds of their diameter, one eighth of their diameter from laterals. Posterior median eyes separated by their width, the same distance from laterals. Anterior median eyes largest, width of oval posterior medians and diameter of others about 0.6 diameter of anterior medians. Height of clypeus one and three-quarters diameters of anterior median eyes. Fourth legs very slightly the longest. Second only slightly shorter than first. Each patella with a retrolateral tubercle.

Epigynum a shallow oval depression with the openings anterior (fig. 27). It is not certain if the ducts connecting the two pairs of seminal receptacles (fig. 28) have been drawn in the right location.

MEASUREMENTS: Carapace 0.66 mm. long, 0.65 mm. wide, 0.48 mm. high. First patella, 0.27 mm., tibia, 0.36 mm.; second patella, 0.26 mm., tibia, 0.36 mm.; third patella, 0.23 mm., tibia, 0.31 mm.; fourth patella, 0.26 mm., tibia, 0.39 mm.

TYPE LOCALITY: Female holotype from San José, Costa Rica (E. Schmidt).

Dipoena eatoni Chickering

Dipoena eatoni CHICKERING, 1943, Trans. Amer. Micros. Soc., vol. 62, p. 350, figs. 30-31 (female).

RECORD: *Chiapas*: Finca El Real, Ocosingo Valley, July 1-7, 1950, one female (C. and M. Goodnight and L. Stannard).

Diponea furtiva Chickering

Figure 18

Dipoena pallida CHICKERING, 1943, Trans. Amer. Micros. Soc., vol. 62, p. 364, figs. 50, 51 (female). (Not *Dipoena pallida* Emerton, 1913.)

Dipoena furtiva CHICKERING, in Roewer, 1951, Abhandl. Naturwiss. Ver. Bremen, vol. 32, p. 455.

This species, which is known only from the female, appears to be very close to *Dipoena lineatipes* Bryant. It differs from the latter species,

however, in its coloration, in having a sclerotized lip on the posterior border of the depression of the epigynum, in having the first pair of seminal receptacles larger than the second pair, and in details of the ducts (fig. 18).

The specimen on hand differs slightly from Chickering's description of the species. The carapace is yellow, the cephalic area dusky to black. Abdomen gray with a white folium on dorsum which is divided by a longitudinal black line. Venter lighter except for a black spot extending two-thirds of the distance up the abdomen on each side. Eyes of posterior row farther from each other than is indicated by Chickering.

RECORD: *Puebla*: Huauchinango, October 7, 1947, one female (H. M. Wagner).

Dipoena fortunata, new species

Figures 10, 17, 21, 22

MALE: Total length, 1.6 mm.

Cephalothorax and legs golden yellow. Abdomen light pinkish gray. Carapace very low (fig. 17). Anterior median eyes separated by one and one-half of their diameter, by one-quarter of their diameter from laterals. Oval posterior median eyes separated by their width, by two-thirds of their width from laterals. Anterior median eyes the largest, the width of others about 0.6 diameter of anterior medians. Height of clypeus three and one-half diameters of anterior median eyes. First and fourth legs subequal.

Palpus much like that of *Dipoena abdita* Gertsch and Mulaik, but differing in details of the sclerites (fig. 10).

MEASUREMENTS: Carapace 0.74 mm. long, 0.65 mm. wide, 0.50 mm. high. First patella, 0.31 mm., tibia, 0.60 mm.; second patella, 0.26 mm., tibia, 0.50 mm.; third patella, 0.23 mm., tibia, 0.37 mm.; fourth patella, 0.31 mm., tibia, 0.58 mm.

FEMALE: Total length, 1.6–2.5 mm.

Coloration like that of male except for the venter of the abdomen, which is lighter than the dorsum.

Carapace very low. Anterior median eyes separated by one diameter, almost touching laterals. Posterior median eyes separated by a little less than their width, by two-thirds of their width from laterals. Height of clypeus equals two and one-half diameters of anterior median eyes. First and fourth legs about subequal in length.

Epigynum a plate with a median longitudinal depression, bordered by a slight ridge on each side and on anterior margin. At the anterior end of each ridge is the opening of the canals (figs. 21, 22).

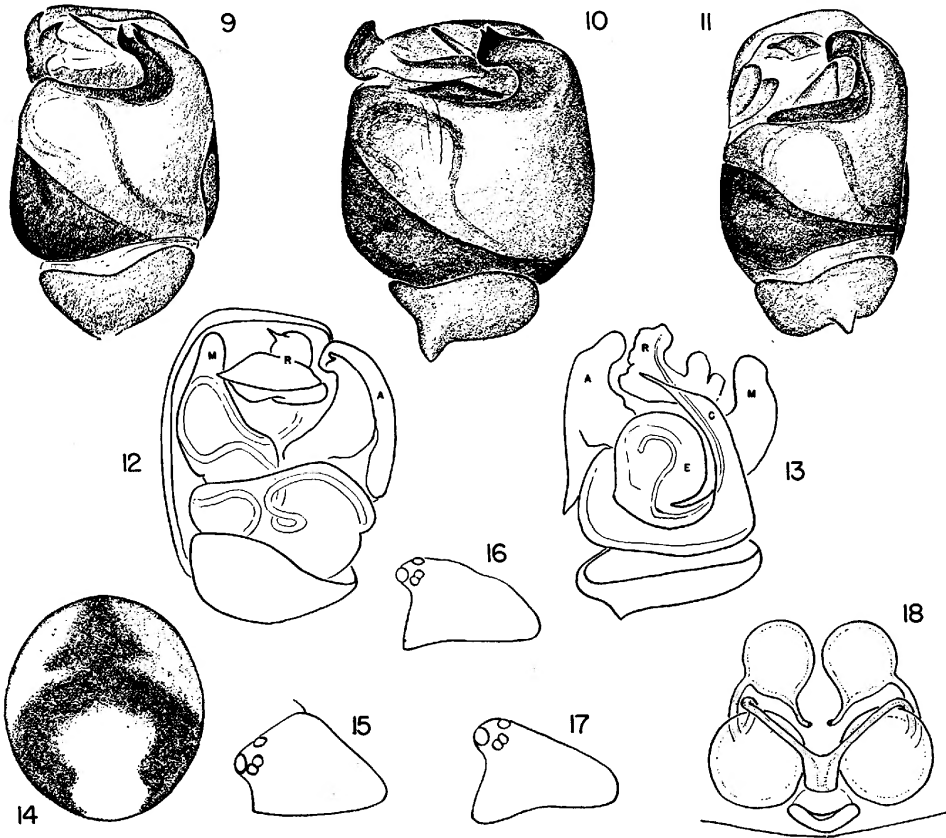


FIG. 9. *Diploana luisi*, new species, palpus, ventral view.

FIG. 10. *Diploana fortunata*, new species, palpus, ventral view.

FIGS. 11-13. *Diploana josephus*, new species, palpus. 11. Ventral view. 12. Ventral view, expanded. 13. Dorsal view, expanded, cybium removed.

FIGS. 14-15. *Diploana copiosa*, new species. 14. Abdomen of female, dorsal view. 15. Carapace of female, lateral view.

FIG. 16. *Diploana luisi*, new species, carapace of male, lateral view.

FIG. 17. *Diploana fortunata*, new species, carapace of male, lateral view.

FIG. 18. *Diploana furtiva* Chickering, in Roewer, female genitalia, ventral view.

A, accessory apophysis; C, conductor; E, embolus; M, median apophysis; R, radix.

MEASUREMENTS: Total length of female allotype, 1.6 mm. Carapace, 0.77 mm. long, 0.65 mm. wide, and 0.35 mm. high. First patella, 0.34 mm., tibia, 0.59 mm.; second patella, 0.29 mm., tibia, 0.50 mm.; third patella, 0.28 mm., tibia, 0.47 mm.; fourth patella, 0.34 mm., tibia, 0.96 mm.

TYPE LOCALITY: Male holotype, female allotype, and one female paratype from La Buena Ventura, Veracruz, 1909 (A. Petrunkevitch).

RECORDS: *Veracruz*: (No locality), June 22, 1936, one female (Davis).
Hidalgo: Chapulhuacan, April 5, 1942, one female, one juvenile female (F. Bonet).

Dipoena josephus, new species

Figures 11–13, 23, 24

MALE: Total length, 1.6 mm.

Coloration similar to that of *Dipoena fortunata*.

Carapace low. Anterior median eyes separated by one and one-half diameters, almost touching laterals. Posterior median eyes separated by their width and by the same distance from laterals. Anterior median eyes the largest, others 0.7 diameter of anterior medians. Height of clypeus equals about three and one-half diameters of anterior median eyes. Fourth legs longest.

The palpus (fig. 11) serves to differentiate this species from *Dipoena abdita* Gertsch and Mulaik, *D. luisi*, and *D. fortunata*. The structure of the palpus is illustrated by figures 12 and 13.

MEASUREMENTS: Carapace 0.71 mm. long, 0.71 mm. wide, 0.48 mm. high. First patella, 0.28 mm., tibia, 0.64 mm.; second patella, 0.28 mm., tibia, 0.55 mm.; third patella, 0.25 mm., tibia, 0.43 mm.; fourth patella, 0.28 mm., tibia, 0.65 mm.

FEMALE: Total length, 1.9–2.6 mm.

Coloration and structure similar to those of *Dipoena fortunata*, except that the fourth legs are longer than first. The sterna of two females appear flattened and deformed. Whether this is due to malformation or to injury could not be determined.

The epigynum has two openings in the anterior sclerotized rim of a depression (figs. 23, 24).

MEASUREMENTS: Total length of female allotype, 2.2 mm. Carapace 0.73 mm. long, 0.68 mm. wide, and 0.41 mm. high. First patella, 0.29 mm., tibia, 0.65 mm.; second patella, 0.29 mm., tibia, 0.53 mm.; third patella, 0.26 mm., tibia, 0.52 mm.; fourth patella, 0.31 mm., tibia, 0.71 mm.

TYPE LOCALITY: Male holotype, female allotype, and four female paratypes from San José, Costa Rica (E. Schmidt).

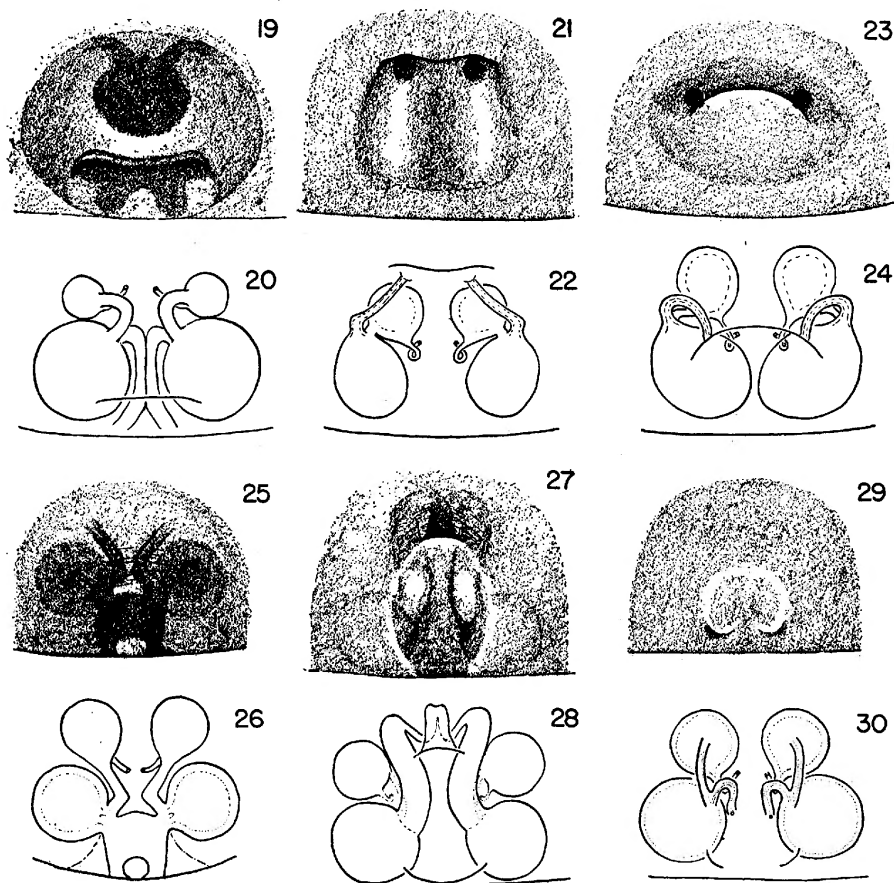
Dipoena luisi, new species

Figures 9, 16

MALE: Total length, 1.7 mm.

Coloration like that of *Dipoena fortunata* and *D. josephus*.

Carapace low (fig. 16). Anterior median eyes separated by their



FIGS. 19-20. *Dipoena tocoja*, new species. 19. Epigynum. 20. Female genitalia, ventral view.

FIGS. 21-22. *Dipoena fortunata*, new species. 21. Epigynum. 22. Female genitalia, ventral view.

FIGS. 23-24. *Dipoena josephus*, new species. 23. Epigynum. 24. Female genitalia, ventral view.

FIGS. 25-26. *Dipoena schmidtii*, new species. 25. Epigynum. 26. Female genitalia, ventral view.

FIGS. 27-28. *Dipoena copiosa*, new species. 27. Epigynum. 28. Female genitalia, ventral view.

FIGS. 29-30. *Dipoena ocosingo*, new species. 29. Epigynum. 30. Female genitalia, ventral view.

diameter, almost touching laterals. Posterior median eyes separated by their diameter, 0.6 diameter from laterals. Anterior median eyes largest, posterior medians 0.8 diameter of anterior medians, laterals 0.7 diameter. Height of clypeus equals about three and one-half diameters of anterior median eyes. Fourth legs longest.

This species is very close to *Dipoena abdita* Gertsch and Mulaik and to

D. fortunata and *D. josephus*. It differs, however, in the shapes of the radix and the tip of the accessory apophyses of the palpus.

MEASUREMENTS: Carapace 0.74 mm. long, 0.65 mm. wide, 0.47 mm. high. First patella, 0.32 mm., tibia, 0.58 mm.; second patella, 0.26 mm., tibia, 0.47 mm.; third patella, 0.23 mm., tibia, 0.39 mm.; fourth patella, 0.26 mm., tibia, 0.61 mm.

TYPE LOCALITY: Male holotype from Tamazunchale in San Luis Potosi, May 20, 1952 (M. Cazier, W. J. Gertsch, and R. Schrammel).

Dipoena crocea (O.P.-Cambridge)

Achaea crocea O. P.-CAMBRIDGE, 1896, *Biologia Centrali Americana*, Araneidea, vol. 1, p. 210, pl. 26, fig. 11 (male). F. O. P.-CAMBRIDGE, 1902, *Biologia Centrali Americana*, Araneida, vol. 2, p. 401, pl. 37, fig. 31 (male). PETRUNKEVITCH, 1911, *Bull. Amer. Mus. Nat. Hist.*, vol. 29, p. 164. ROEWER, 1942, *Katalog der Araneae*, vol. 1, p. 445.

This *Dipoena*, reported from Guatemala, is very close to the preceding three species.

Dipoena insulana Chickering

Dipoena insulana CHICKERING, 1943, *Trans. Amer. Micros. Soc.*, vol. 62, p. 355, figs. 36-39 (male and female).

The male on hand from Mexico has a pattern of dark gray dots on white on the dorsum of the abdomen. There is no white spot anterior to the spinnerets.

RECORDS: *Costa Rica*: Seven miles west of Turrialba, altitude 2500 feet, August 12, 1927, one female, in the Cornell University collection (Hamilton). *Colima*: Manzanillo, January 15, 1943, one male (F. Bonet).

Dipoena ocosingo, new species

Figures 29, 30

FEMALE: Total length, 2.4-2.9 mm.

Carapace grayish brown except for black region between anterior median eyes. Sternum dusky brown, legs light brown and abdomen gray.

Structure of carapace typical. Anterior median eyes separated by three-fourths of their diameter, almost touching laterals. Posterior median eyes separated by two-thirds of their diameter, two-thirds of their diameter from laterals. Anterior median eyes larger than others. Posterior median eyes 0.7 diameter of anterior medians, lateral eyes 0.6 diameter. Height of clypeus two and one-quarter diameters of anterior median eyes. Fourth legs the longest.

Epigynum (fig. 29) two pockets facing an anterior depression. The

ducts of the genitalia are very transparent and are difficult to see even in a microscope preparation (fig. 30).

MEASUREMENTS OF HOLOTYPE: Total length, 2.6 mm. long. Carapace 0.84 mm. long, 0.78 mm. wide, 0.45 mm. high. First patella, 0.36 mm., tibia, 0.71 mm.; second patella, 0.30 mm., tibia 0.52 mm.; third patella, 0.27 mm., tibia, 0.47 mm.; fourth patella, 0.39 mm., tibia, 0.78 mm.

TYPE LOCALITY: Female holotype from El Real, Chiapas, July 6, 1950 (C. and M. Goodnight and L. J. Stannard).

RECORDS: *Chiapas*: Near Rio San Gregorio, Kilometer 1327 between Comitán and Ocotlán, July 18, 1950, one female paratype (C. and M. Goodnight); Ocosingo Valley, Finca El Real, July 1-7, 1950, two female paratypes (C. and M. Goodnight and L. J. Stannard).

Dipoena origanata, new species

Figures 5-8

MALE: Total length, 1.4 mm.

Carapace and sternum brownish black. Coxae whitish, with distal dusky rings. Legs orange, with proximal and distal portions of femora, distal portions of patellae, middle and distal portions of tibiae, and metatarsi having dusky rings. Abdomen black.

Carapace conical, sides finely striate, and thoracic furrow scalloped (figs. 5, 6). Anterior median eyes separated by two-thirds of their diameter, almost touching laterals. Posterior median eyes separated by two-thirds of their diameter, and three-quarters of their diameter from laterals. Anterior median eyes larger than others. Diameters of other eyes about 0.8 diameter of anterior medians. Height of clypeus about three and one-half diameters of anterior median eyes. Fourth legs longest.

This species can be distinguished by its palpus (fig. 7). The tip of the embolus lies against the conductor which is a broad white fold. Radix not a separate sclerite but just a flat projection from the proximal portion of the median apophysis (figs. 7 and 8).

MEASUREMENTS: Carapace 0.69 mm. long, 0.63 mm. wide, 0.50 mm. high. First patella, 0.26 mm., tibia, 0.52 mm.; second patella, 0.26 mm., tibia, 0.45 mm.; third patella, 0.28 mm., tibia, 0.45 mm.; fourth patella, 0.26 mm., tibia, 0.55 mm.

TYPE LOCALITY: Male holotype from San Cristobal, Chiapas, July 21, 1950 (C. and M. Goodnight and L. J. Stannard).

Dipoena schmidtii, new species

Figures 25, 26

FEMALE: Total length, 1.4 mm.

Carapace dusky brown, with eye region dusky and a narrow black

margin. Sternum and legs dusky brown. Abdomen brownish gray, venter lighter.

Carapace very low. Anterior median eyes separated by one diameter, almost touching laterals. Posterior median eyes separated by their width and the same distance from laterals. Anterior median eyes largest. The width of oval posterior median eyes 0.8 diameter of anterior medians, the anterior laterals 0.6, the posterior laterals 0.7, diameter of anterior medians. Height of clypeus 2.2 diameters of anterior median eyes. The seam between labium and sternum very distinct. Fourth legs longest. Patellae each with a retrolateral tubercle.

This species can be distinguished from others by its epigynum which has a sclerotized plate with an opening apparently at its posterior margin (fig. 25). The first pair of seminal receptacles shows through the integument as two black bodies. The connecting canals are short (fig. 26).

MEASUREMENTS: Carapace 0.65 mm. long, 0.67 mm. wide, 0.36 mm. high. First patella, 0.28 mm., tibia, 0.52 mm.; third patella, 0.26 mm., tibia, 0.40 mm.; fourth patella, 0.32 mm., tibia, 0.65 mm.

TYPE LOCALITY: Male holotype from San José, Costa Rica (E. Schmidt).

Dipoena superba Chickering

Dipoena superba CHICKERING, 1948, Trans. Amer. Micros. Soc., vol. 67, p. 337, figs. 8-10 (male).

RECORD: *Chiapas*: Palenque Ruins, in soil, July 16, 1949, one male (C. J. Goodnight).

Dipoena tecoja, new species

Figures 19, 20

FEMALE: Total length, 1.9 mm.

Carapace dusky olive brown, eye region dusky to black. Sternum and legs olive brown. Sides of legs darker. Abdomen olive black, venter and area around spinnerets darker.

Carapace low, almost triangular in outline, narrow in cephalic region and posterior margin almost straight. Anterior median eyes separated by three-fourths of their diameter, almost touching laterals. Posterior median eyes separated by two-thirds of their diameter and by one diameter from laterals. Anterior median eyes larger than other eyes. Posterior medians 0.8 diameter, laterals 0.7 diameter, of anterior medians. Height of clypeus about two and one-half diameters of anterior median eyes. Fourth legs longest.

This species can be distinguished from others by the epigynum which

has on its posterior margin a plate with two lips. Anterior to this is a circular dark area (fig. 19). The second pair of seminal receptacles is much smaller than the first (fig. 20).

MEASUREMENTS: Carapace 0.65 mm. long, 0.65 mm. wide, 0.36 mm. high. First patella, 0.26 mm., tibia, 0.39 mm.; second patella, 0.24 mm., tibia, 0.38 mm.; third patella, 0.23 mm., tibia, 0.36 mm.; fourth patella, 0.29 mm., tibia, 0.60 mm.

TYPE LOCALITY: Male holotype from Tecoja, Chiapas, July 2, 1950 (C. and M. Goodnight and L. J. Stannard).

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CHICKERING, A. M.

- 1943. Twenty-one new species of *Dipoena* (Theridiidae) from Panama. Trans. Amer. Micros. Soc., vol. 62, p. 329-378.
- 1948. Four new species of *Dipoena* (Araneae; Theridiidae) from Panama. *Ibid.*, vol. 67, p. 331-340.

